



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,176	06/30/2005	Gerhardus Wilhelmus Lucassen	PHNL021454US	6319
38107	7590	08/03/2009	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS			CHENG, JACQUELINE	
P. O. Box 3001			ART UNIT	PAPER NUMBER
BRIARCLIFF MANOR, NY 10510			3768	
MAIL DATE	DELIVERY MODE			
08/03/2009	PAPER			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/541,176	LUCASSEN ET AL.
	Examiner	Art Unit
	JACQUELINE CHENG	3768

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 12 May 2009.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-18 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed May 12, 2009 with respect to the 35 U.S.C. 112 rejection have been fully considered and are persuasive. The 35 U.S.C. 112 rejection of claim 11 has been withdrawn.
2. Applicant's arguments filed May 12, 2009 have been fully considered but they are not persuasive. The examiner respectfully disagrees with the applicant's arguments that Marchitto (US 2002/0016533 A1) does not disclose a beam separation unit, a monitoring system, and a control unit. Marchitto discloses his system having gratings and notch filters which are beam separation units. Furthermore a Raman spectroscopy system inherently has a beam separation unit as the function of a Raman spectrometer is to collect inelastic Raman scattering and rejecting elastic Rayleigh scatters so there must be a way of separating at least part of elastically scattered radiation from inelastically scattered radiation. The system of Marchitto also generates an image of the target region, defining the region of interest by only capturing the information that pertains to the region of interest, such as capturing scattered photons specific to Hb indicating the region of interest of a blood vessel (a monitoring system). Lastly Marchitto discloses controlling the system so that there is good rejection of signals not pertaining to the molecule of interest (detecting scattered radiation only from the blood vessel, the defined region of interest) as well as teaches that the system illuminates the anatomic structure of interest by moving the excitation beam in a collimated and focused raster-scan (exciting only the defined region of interest). Since only the inelastic Raman scattering is collected (the rest of the scattered

radiation not pertaining to the molecule of interest so therefore are rejected), the detection unit spectrally analyzes only the inelastically scattered radiation.

3. It is for these reasons that the examiner believes that the rejection dated February 18, 2009 still stands for the previous, amended, and new claims, and is repeated below.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1-18 are rejected under 35 U.S.C. 102(a) as being anticipated by Marchitto (US 2002/0016544 A1).

6. **Claims 1-6, 9-18:** Marchitto discloses a method and system of optical imaging of subsurface anatomical structures. The system comprises an excitation system (infrared laser illumination, fig. 3) exciting an anatomical structure of interest by moving the excitation beam in a collimated and focused raster-scan (moving the excitation beam to excite only the defined region of interest), a detection and monitoring system which detects scattered radiation emitted by the sample, defines a region of interest by the inelastic scattered photons, such as the photons specific to Hb, which indicate a blood vessel, and generates an image (ramen spectrograph, fig. 3), and a control unit which controls the detection system so that only the scattered radiation from the defined region of interest is detected (controller and data collection, fig. 3). Marchitto also discloses a beam separation unit, such as gratings and notch filters, however does not

disclose that this filters separate the inelastic and elastic scattering. This is inherent in a Raman spectroscopy system as the function of a Raman spectroscope is to collect inelastic Raman scatterings, rejecting the elastic Rayleigh scatterings. Furthermore Marchitto discloses that Raman scattering would allow for good rejection of signals not pertaining to the molecule of interest, in this case rejecting elastic signals and inelastic signals not pertaining to the inelastic Raman scattered photons specific to the blood vessels (paragraph 0036-0037). Since only the inelastic Raman scattering is collected (the rest of the scattered radiation not pertaining to the molecule of interest so therefore are rejected), the detection unit spectrally analyzes only inelastically scattered radiation.

7. **Claim 7:** Marchitoo also discloses an embodiment where fluorescence inelastic scattering is created and separated from the reflected elastic scattering which uses a confocal microscope (fig. 2, paragraph 0034-0035).

8. **Claim 8:** Marchitoo further discloses using polarized light and polarizing filters to enhance blood vessel image contrast (paragraph 0020, 0047-0049).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

10. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JACQUELINE CHENG whose telephone number is (571)272-5596. The examiner can normally be reached on M-F 10:00-6:30.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JC

/Long V Le/
Supervisory Patent Examiner, Art Unit 3768